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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/715,817

11/17/2003

Masahiko Harumoto

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EXAMINER

KOCH, GEORGE R

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

06/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/715,817	Applicant(s) HARUMOTO ET AL.	
	Examiner George R. Koch III	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-40 and 46-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-40 and 46-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/16/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/16/2008 has been entered.

Claim Rejections - 35 USC § 112

2. Applicant has chosen to invoke 35 U.S.C. § 112 6th paragraph in claims 36 and 46 with the language “switching means”, “type selecting means”, “substrate treating condition selecting means”, "correlation storage means" and "developing time derivation means".

a. “Switching means” corresponds to touch panel (24) in the specification. See page 31, lines 16-19 of the specification (reciting that “The touch panel 24 *corresponds to the...switching device...*”)

b. “Type selecting means” corresponds to touch panel (24) in the specification. See page 31, lines 16-19 of the specification (reciting that “The touch panel 24 *corresponds to the...type selecting device...*”)

c. “Substrate treating condition selecting means” corresponds to touch panel (24) in the specification. See page 31, lines 16-19 of the specification (reciting that “The touch panel 24 *corresponds to the...substrate treating condition selecting device...*”)

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d. "Correlation storage means" corresponds to the correlation memory (20) in the specification. See page 31, lines 2-4 of the specification (reciting that "The correlation memory 22 *corresponds* to the *correlation storage device*...")

e. "Developing time derivation means" does not appear to correlate to any positively recited structure in the originally filed application. Numerous references are made to a process of determining or deriving a developing time, but no structure is disclosed.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 36-40 and 46-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claims 36-40 and 46-50, the word "means" is preceded by the word(s) "developing time derivation" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, there is no structure in the specification corresponding to the means-plus-function, it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. "If there is no structure in the specification corresponding to the means-plus-function limitation in the claims, the claim will be found invalid as indefinite". *Biomedino, LLC v. Waters Technologies Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007). Since applicant provides no explicit corresponding structure in claims 36-40 and 46-50, the claims are indefinite.

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 36-40 and 46-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Deguchi (US Patent 6,281,145).

With respect to independent claims 36, and 46, applicant's claims invoke 35 USC 112, 6th paragraph. A review of the specification suggests that the various switching/selecting/type selecting means are operator inputs that are manually entered by the operator (see, for example, Step T1 on page 32, lines 10-16) through touch panel 24, and that the various correlation means are a controller with a series of developing solution application times which are based on a known correlation to the developing or photoresist solution selected (see pages 33-34, step T4, which shows options A, B, C, etc, which results in the selection of an optimal developing time in step T6) through correlation memory 22. Various factors are taken into account, such as dissolving rate and diffusion factors. As noted above, no corresponding structure is disclosed for the developing time derivation means.

Deguchi discloses a developing system. It includes numerous possible application solutions (see Figure 5, item 51, resist solutions AAA, BBB, CCC, and DDD), and these solutions are correlated to ideal times or rates (shown in the symbols in Figure 5, item 51). Deguchi also discloses a selection element (item 5, see the discussion in column 5 and 6). Deguchi discloses structure, the solution selecting section, which structurally corresponds to the "switching means", "type selecting means", and "substrate treating condition selection means".

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Additionally, Deguchi discloses a data storage section 51 and a control section 52, which corresponds to the correlation storage means. The data storage section and control section of Deguchi are capable of performing the claimed functions of developing time derivation. For example, Deguchi recognizes that one can change the operating conditions on the basis of the variables (see column 8, lines 60-67), and is considered capable of implementing the claimed variables and calculating the appropriate time limits.

With respect to dependent claims 37-40, and 47-50, the apparatus of Deguchi is capable of coating the claimed coating solution, pattern size or pattern form. The apparatus of Deguchi includes correlations for different coating solutions and process variables.

Response to Arguments

8. Applicant's arguments filed 5/16/2008 have been fully considered but they are not persuasive. With respect to applicant's arguments as to the 112 rejections, applicant refers to page 45, lines 2-5 for support. This cited section refers to a correlation memory. However, the cited section does not explain how the correlation memory operates to perform the step of "deriving a developing time for developing the exposed substrate based on the at least one type, the one substrate treating condition, and the stored correlations". It may support where that developing time gets stored, but not the actual derivation.

9. Applicant appears to argue that a memory of some sort would be acceptable in order to meet this derivation means in terms of 112, but that a similar structure in Deguchi would not be capable of performing this step.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can also be reached by E-mail at george.koch@uspto.gov in accordance with MPEP 502.03. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George R. Koch III/
Primary Examiner, Art Unit 1791

6/21/2008